

## REMARKS

This is intended as a full and complete response to the Office Action dated February 6, 2009. Please reconsider the claims pending in the application for reasons discussed below.

### ***Claim Rejections - 35 U.S.C. § 112***

The Examiner rejected claims 36-41 under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. In response, Applicants have amended independent claims 36, 40 and 41.

Regarding independent claim 36, it is now clarified that the control signal which provides operator information utilizes radio broadcast systems with inherent capability of carrying data, such as but not limited to RDS, RBDS and DAB systems. The data is operator information from a Multi utility provider. It must be considered obvious that the subject matter of this claim does not cover broadcast signals as such; rather, as worded, it covers radio broadcast signals via RDS, etc., having a particular content which enables automatic demand for non-durables. An analogue to this is found in telecommunication and data communication where signal contents often are referred to as protocols, where the protocols are carriers of payload, i.e., data. Support for the amendments can be found in previous claim 9, "via at least one radio broadcasting station utilizing any one of the RDS, RBDS and DAB systems:", and among others, also from page 25, lines 1-7. Further, claims 37 and 38 have been cancelled and new claim 47 has been added.

Regarding independent claim 40, the claim is directed against a system for automatic management of demand for non-durables. As it is a claim directed towards a system with the purpose as recited in the introduction of the claim, it includes a number of elements. The elements are:

- a Multi Utility provider
- a data communication signal (return signal from end-users).

The remaining features of the claim describe the capabilities and functions of these two elements. The Multi Utility provider is characterized by the technical features of: being

configured to transmit control signals to a plurality of End-users on a radio broadcast channel wherein said Multi Utility provider broadcasts the control signal via at least one radio broadcasting station utilizing any one of the RDS, RBDS and DAB systems. That is the Multi Utility provider is not a random Multi Utility provider; rather, it is a provider that is technically capable of transmitting control signals using radio channels and utilizing one of the RDS, RBDS and DAB systems. The person skilled in the art will readily understand that the Multi Utility provider as part of a system includes a radio transmitter and also signal generating means suitable to initiate control signals. Radio transmitters that utilize RDS, RBDS and/or DAB technique is known as such.

The data communication signal (return signal from end-users) is a signal which at least has as payload 'non-durables consumption information'. This payload information is transmitted in a signal channel different from said broadcast channel to the Multi Utility provider for providing End-user return information, thereby enabling non-durables delivery control and pricing influenced by demand. The person skilled in the art will readily realize that any return channel can be utilized as long as it is not in conflict with the Multi Providers' channel, which is a radio broadcast channel. The smartness is not the choice of channel, but rather the content of the information sent to the Multi Utility provider, hence rendering the system "intelligent" as there is an "action-response-corrected action" communication between End users and the Multi Utility provider. The corrected actions are the Multi Utility providers' response to received information such as non-durables consumption information.

Regarding independent claim 41, the claim has been amended so as to clearly indicate that the method relates to a method for returning signals in response to an action initiated by a Multi Utility provider. For similar reasons as set forth herein, Applicants believe that claim 41 distinctly claims the subject matter which Applicant regards as the invention.

For these reasons, Applicants respectfully request the § 112 rejection of claims 36, 39, 40 and 41 be removed and allowance of the same.

***Claim Rejections - 35 U.S.C. § 101***

The Examiner rejected claims 36-39 under 35 U.S.C. § 101 because the claimed invention is directed to non-statutory subject matter. According to the Examiner, a "signal" is non-statutory matter. It may be correct that signals per se are non-tangible and hence non-statutory matters. However, the subject matter according to said claims are not directed against a signal as such; rather, it is directed against signals that have sudden characteristics with respect to payload and technique for transmission. In the discussion above, it is clearly indicated what shall be assessed as subject matter. Reference shall also be made to The Walter-Freeman-Abele test which, among others, include inventions relating to conversion of seismic signals or traces (see In re Taner 214 USPQ 678 (CCPA 1982), Application of Sherwood 204 USPQ 537 (CCPA 1980) cert denied 450 US 994 (1981) and a system for processing and supervising a plurality of subscriber accounts by the interaction of various means (see Paine, Webber, Jackson and Curtis v. Merrill Lynch, Pierce, Fenner and Smith 564 F. Supp 1358, 218 USPQ 212 (D. Del, 1983). For these reasons, Applicants respectfully request the § 101 rejection of claims 36 and 39 be removed and allowance of the same.

***Claim Rejections - 35 U.S.C. § 103***

The Examiner rejected claims 1-24, 26-38 and 40-46 under 35 U.S.C. § 103(a) as being unpatentable over Ehlers (U.S. 5,572,438). In response, Applicants have amended independent claims 1, 20, 34, 36, 40, 41 and 42.

As amended, claim 1 includes limitations emphasizing that the broadcast control signal is transmitted to all the electronic boxes, and that the control signal is transmitted "via at least one radio broadcasting station utilizing any one of the RDS, RBDS and DAB systems". Claim 1 further includes limitations that indicate that turning apparatuses on and off is effectuated by switching means in the electronic boxes. Support for the switching means is, among others, found in section three on page 23 of the PCT pamphlet.

The basis for the amendments to claim 1 is as follows (PCT pamphlet):

- transmitted to all the electronic boxes: page 25, lines 18-19, page 26, lines 32-33;

- via at least one radio broadcasting station utilizing any one of the RDS, RBDS and DAB systems: claim 6;
- said electronic boxes comprising a metering gateway transmitting back to said Multi Utility provider through a telecommunication network, instant or semi-instant non-durable consumption values measured at said End-users' premises by said electronic boxes: previous claim 13, 27, and previous claim 11. The latter indicates the use of telephone networks, either wired or wireless.

Claim 20 has been amended in accordance with claim 1. Additionally, the following feature is also added: "specialized electronic boxes at End-users' premises, with microprocessor capability for performing the following functions: -'turning connected non-durable consuming apparatuses on and off (between apostrophe is added)',". The phrase "turning connected..." is, among others, supported by claim 1. Support will also be found in several places in the specification.

According to the Examiner, Ehlers (in column 8, lines 12 to 18; column 9 line 42) describes "at End-users' premises specialized electronic boxes having microprocessor capability for performing the following functions: receiving broadcast control signals from a Multi Utility provider; (C. 25, L. 9-10, 16-17). Applicants respectfully disagree with this interpretation of Ehlers. Ehlers clearly indicates that the carrier of control signals is a network; "a local area network communications medium 20, which in the exemplary form discussed below is a power line carrier (PLC) bus;"

Claims 1, 20, 34, 36, and 40-42 have been amended so as to distinguish the broadcasting features in view of Ehlers. For instance, as amended, claim 1 includes the limitations of "providing at End-users' premises specialized electronic boxes having microprocessor capability to: receive radio broadcast control signals by a radio receiver comprised in said electronic boxes at the End-users' premises from a Multi Utility provider;"

The Examiner states: "End users programming said boxes by setting parameter values in accordance with End-users priorities (C. 10 L. 28-30). However, Ehlers merely discloses: "the customer to schedule timed turn-on turn-off events and transmits

those events to the CPEU\_PGM program for execution. There is no mention of End-users programming said boxes; rather, it indicates that the End-users are given information such as reports via a users interface. This feature is now identified as item c) in the amended claim 1.

The present claim 1 is further amended so as to emphasize the difference between prior art and the subject matter according to the present invention. The remaining features are described as follows, where deletions are indicated by strikethrough and additions are indicated by underline:

- b) determining whether information contained in said broadcast control signals, stored algorithms and End-user adjustable parameter value settings, utilizing said electronic boxes, satisfies a condition for any End-user non-durable consuming apparatuses connected to a network delivering said non durables ~~connected non-durable-consuming-apparatus~~ to be switched on;
  - if so, turning connected non-durable consuming apparatuses on by utilizing switching means in said electronic boxes,
  - if not, turning connected non-durable consuming apparatuses off by utilizing switching means in said electronic boxes,
- c) End-users programming said boxes by setting parameter values in accordance with End-users' priorities~~[[,]]~~;
- d) transmitting at least one radio broadcast control signal ~~broadcasting from a Multi-Utility provider a control signal to be received by said boxes, which~~ radio broadcast control signal is received by said radio receiver in all said electronic boxes;
  - wherein said Multi Utility provider broadcasts the control signal via at least one radio broadcasting station utilizing any one of the RDS, RBDS and DAB systems;
- e) said electronic boxes taking automatic turn-off or turn-on action for some non-durable consuming apparatuses connected to said network in accordance with stored control algorithms, the parameter values set by

said End-users and information provided by said control signal, and wherein

- f) said electronic boxes comprising a metering gateway transmitting back to said Multi Utility provider, through a telephone or mobile telephone network, instant or semi-instant non-durable consumption values measured at said End-users' premises by said electronic boxes.

As to the rejection of feature "b" of claim 1, Applicants respectfully disagree with this interpretation of Ehlers. As set forth in Ehlers, "The status flag in the device table may be set to indicate the shed status of a device. If an "end load shedding" broadcast is received, then for each device on the system, the first microcomputer checks the status flag and generates a command to restore power to the load."

The present invention, according to the independent claims, does not keep track of the ON/OFF status of the non-durable consuming apparatus, and does not indicate surveillance of the statuses as such; it just identifies whether ON or OFF is a correct condition.

The key to making the invention disclosed in Ehlers' work is that the microcomputer keeps track of every single load in the household (their power consumption, history, etc.). (See, e.g., Ehlers, col.13, lines 41-59 and FIGS. 8-10.) The present invention does not need to be aware of what load is being connected in the house; only the loads that draw power via the colored switches (red, green, blue) will be turned on/off. There is simply no indication in Ehlers to provide the simple solution of the present invention.

Regarding feature "d" of claim 1, this feature includes the limitation of transmitting at least one radio broadcast control, which radio broadcast control signal is received by said radio receiver in all said electronic boxes. The use of a power-line carrier (PLC) system as in Ehlers for providing control signals to the microcomputers at the customer premises is often subject to problems of interference and noise in the control signal. The use of a radio broadcast control signal according to the present invention will not be subject to such problems. In addition, a radio broadcast transmission may be sent from one central location in a country and received by all electronic boxes in about two

seconds, whereas use of PLC for transmission will take a considerably longer time, and all the customers may not be covered with one control signal transmission.

Radio broadcast is very effective during an emergency because of its ability to reach the intended audience instantly and simultaneously, as compared to traditional communication technologies such as, e.g., wired or wireless phone networks, PLC, GSM modems, analogue modems, etc. (description page 30, lines 10-13). This is crucial in order for the Multi-utility provider to, e.g., instantly reduce consumption to avoid network overload and collapse of the network (blackout) (description page 31, lines 3, 16-33).

Furthermore, Ehlers fails to disclose or suggest a radio broadcast control signal utilizing any one of the RDS, RBDS and DAB systems according to the present invention. In fact, Ehlers even points away from a solution using a radio broadcast control signal broadcasted to all End-users according to the present invention.

As set forth herein, the amended claims clearly distinguish over the subject matter of Ehlers. As previously set forth, there is no mention of any radio control signals such as RDS, RBDS and DAB which is suitable for carrying data in Ehlers, nor is there any mention of direct user programmable specialized electronic boxes. As the Examiner indicates, the determination procedure now found in feature "b" is not directly indicated in Ehlers. It is also emphasized that all boxes receive at least one radio broadcast control signal from a Multi Utility provider. Further, feature "f" is not disclosed in Ehlers. Support for feature "f" can, among others, be found in (PCT pamphlet) on page 13, fig. 9, fig. 13 and page 14 fig 14.

Importantly, the claim shall be interpreted as a method comprising a number of steps to arrive at the invention; the subject matter is defined by all of the steps. Ehlers clearly fails to disclose the steps set forth in the claims. To collect fragments spread out in the description of Ehlers and then interpret each of the features in its broadest meaning, and thereafter combining them in a sequence identical to the method claimed in claim 1 and thereafter indicate that claim 1 is obvious, clearly indicates the opposite namely that the subject matter is non obvious to the person having ordinary skill in the art. Ehlers is interpreted in light of hindsight with knowledge from the subject matter according to the present invention. The person having ordinary skill in the art at the

filing date did not have any knowledge about the subject matter as disclosed by the present application.

Claim 20 has been amended in accordance with claim 1, except for the feature indicated as feature "f" in claim 1. For similar reasons as set forth above, Applicants believe that claim 20 is patentable over Ehlers. The same reasoning as above is also valid for claim 34.

As to claim 36, this claim has been amended to include the features of "A radio broadcast control signal with inherent capability of carrying data for providing operator information from a Multi Utility provider to specialized electronic boxes at End-users' premises wherein said Multi Utility provider broadcasts the control signal via at least one radio broadcasting station systems.". There are no hints or indication in Ehlers which point in the direction of providing radio broadcast signals which carry a payload similar to what is found in the amended claim 36. Additionally, for similar reasons as set forth above, Applicants believe that claims 40-42 are patentable over Ehlers.

As the foregoing illustrates, Ehlers fails to render claims 1, 20, 34, 36, 40, 41 and 42 obvious. For these reasons, Applicants submit that claims 1, 20, 34, 36, 40, 41 and 42 are in condition for allowance and respectfully request withdrawal of the § 103(a) rejection. Additionally, the claims that depend from claims 1, 20, 34, and 36 are allowable for at least the same reasons as claims 1, 20, 34, and 36.

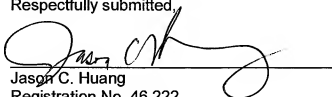
The Examiner rejected claims 25 and 39 under 35 U.S.C. § 103(a) as being unpatentable over Ehlers and Ehlers et al. (US 2004/0117330). Applicants respectfully traverse the rejection. Claim 25 depends from claim 20, and claim 39 depends from claim 36. As set forth above, Ehlers fails to disclose all the limitations of claims 20 and 36. Further, Ehlers et al. fails to cure the deficiencies of Ehlers. Therefore, the combination of Ehlers and Ehlers et al. fails to disclose all the limitations of claims 25 and 39. Applicant respectfully requests the 103(a) rejection of claims 25 and 39 be removed and allowance of the same.



**Conclusion**

Having addressed all issues set out in the office action, Applicants submit that the claims are in condition for allowance and request that the claims be allowed.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Jason C. Huang", is written over a horizontal line.

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